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GENDER DISPARITIES IN MORBIDITIES AND HEALTHCARE USE AMONG OLDER ADULTS IN INDIA - A VIOLATION OF HUMAN RIGHTS

Dr. Ruby Alambusha Singh,

Assistant Professor, Population Research Center, Institute of Economic Growth, Delhi University, Delhi, India

Abstract

The present research study aims to shed light on the changing pattern of Gender disparities in morbidities and healthcare use among older adults in India. The right to health is a fundamental right of every human being leading to the enjoyment of the highest attainable standard of health. Health and Human rights have explicit intrinsic connections and has emerged as powerful concepts. Aging brings in its fold innumerable problems to the aged, especially women. Older women are more likely to be widowed, poor and suffer vulnerability. The women suffering from chronic ill health and disability are a reflection of the low status of women in society. The source of data was National Sample Survey Office unit level data for the 71st and 66th rounds, 60th rounds. About 60 per cent of the elderly depends on others for their day-to-day maintenance while less than 20 per cent elderly women and the majority of elderly males were economically independent. Amongst the economically dependent, 85 percent of men and 70 percent of women were supported by their children. A significant number of elderly, especially females, are confined to home. Overall, morbidity prevalence was significantly greater among single older women compared to single older men with a corresponding gender ratio of 1.13 (p, 0.001). The prevalence of communicable diseases was lower among single older women compared to single older men with a corresponding gender gap of 0.87 (p, 0.001). The prevalence of non-communicable diseases was significantly greater among single older women by 18% (p, 0.001) compared to single older men.

Key words: Gender disparity, morbidities, health care, health seeking behavior, older adults

Introduction:-

Aging is a sequential series of processes that begin with life and continue throughout the life cycle. The extension of human life years, in the 21st century, has been achieved due to a combination of improved medical, social and evolutionary factors, resulting in a growing number of ageing population in most countries of the world, including India (Gupta *et al.*,2009). The graying world is also witnessing several phenomena, one of which is that of '*graying feminization of aging*'. There has been a steady rise in the share of the elderly population (age 60 years or above) in the total population over the decades. As against 5.6% in 1961, the proportion goes up to 7.4% in 2001. For males, the rise was more modest from 5.5% to 7.1%, while for females there had been a steep rise from 5.8 to7.8% during the five decadal Censuses from 1991 to 2001. It can also be observed that the percentage (of elderly) had all along been higher in rural areas than that in urban with a female preponderance (Census, 2011). Biological, social, and psychological differences between the sexes. Strengthening health equity globally and within countries means, going beyond a contemporary concentration on the immediate causes of disease, the fundamental structures of social hierarchy and the socially determined conditions in which people grow, live and work. (Steinbrook, 2008) Health and Human rights have explicit intrinsic connections and has emerged as powerful concepts. The right to health is a

fundamental right of every human being and it implies the enjoyment of the highest attainable standard of health (Rajan, 2006). Healthy living conditions and access to good quality health care for all citizens are not only basic human rights, but it is also essential prerequisites for social and economic development and can play a very important role in the creation of a new world (Shiva, 2002). Any inequality in social, economic or political context between various population groups in a given society will affect the health indicators of that particular society (Narayan, 2000). The level of development achieved by a society is often determined on the basis of the quality of its population's health, how fairly health is distributed across the social spectrum, the degree of protection provided from ill-health, the system of health care and services prevalent in the society. If women suffer from chronic ill health and disability, it is a reflection of their lower status in society (Shanta, 2011). Women issues frequently arise as concerns to be dealt with sensitively. (Banks, Ackerman, & Clark, 1986; Trotman & Brody, 2002). Morbidity (from Latin morbidus, meaning "sick, unhealthy") has been defined as any departure subjective or objective from a state of physiological well-being, and is equivalent to terms, such as sickness, illness and disability. It is important to delay the onset of disability or morbidity to ensure optimal quality of life for older people. Morbidity pattern among the elderly varies from country to country. (Davida, 2007) From the morbidity point of view, almost 50% of the Indian elderly have chronic diseases and 5% suffer from immobility. Chronic conditions which produce infirmity and disability become more common in old age. (Census, 2011).

Gender inequalities in health have been a major area of sociological research interest since the early 1970s. The Ministry of Social Justice and Empowerment, Government of India in its document on the National Policy for Older Persons (1999), has relied on the figure of 33% of the general population below poverty line and has concluded that one-third of the population in 60 plus age group is also below that level - 23 million. It also looks at the gender disparities among the Poverty target Programs for the Elderly in India. The problems faced by the females are more critical compared to that of men due to low literacy rate, higher incidence of widowhood, customary ownership of property by men and majority of women being not involved in economic and financial tasks during their prime age with only very few in the organized sector. As female live longer, they need more intensive and long-term care, which in turn may increase financial stress in the family (Siva, 2002). About 65% of the aged have to depend on others for their day-to-day maintenance. The situation is worse for elderly females with about only 14% to 17% being economically independent in rural and urban areas respectively, while the remaining are dependent on others - either partially or fully (Census, 2011).

The Global Report on Ageing in the 21st Century (2012) reinforces the observations made in India that there is multiple discrimination experienced by older persons, particularly older women, including in access to jobs and health care, subjection to abuse, denial of the right to own and inherit property, and lack of basic minimum income and social security (UNFPA & Help Age International, 2012). Women and men have different health care needs. Compared with men, women's health needs are more complex and change over their life's course, often requiring multiple providers and specialists (Bierman and Clancy 1999). Women also have fewer resources to address their health care needs. Rising health care costs have a disproportionate impact on women even those with health insurance because of their lower socio-economic status.

Elderly in the country along with their demographics as well as dependency:

India, the world's second most populous country, has experienced a dramatic demographic transition in the past 50 years, entailing almost a tripling of the population over the age of 60 years (i.e., the elderly) (Government of India, 2011). This pattern is poised to continue. It is projected that the proportion of Indians aged 60 and older will rise from 7.5% in 2010 to 11.1% in 2025 (United Nations Department of Economic and Social Affairs [UNDESA], 2008). This is a small percentage point increase, but a remarkable figure in absolute terms. The number of elderly in India is projected to reach 158.7 million in 2025 (United Nations Department of Economic and Social Affairs, 2008), and is expected, by 2050, to surpass the population of children below 14 years (Raju, 2006). These figures mask the unevenness and complexities of the demographic transition within India across different states with

different levels of economic development, cultural norms, and political contexts. Projected estimates of population structure in 2025 for North India retain a "pyramidal" shape, while for south India, the share of the elderly population is expected to expand considerably. Linear growth in the population of the elderly is expected in the next 100 years, with steeper gradients of increase in central and east India and leveling off of absolute numbers of elderly in the north, south, west, and northeast (Aliyar and Rajan, 2008).

A few important characteristics of the elderly population in India are:

According to 2011 Census, out of the total population, 7.5% of the population who are elderly, two-thirds live in villages and nearly half are of poor socioeconomic status (SES) (Lena et al., 2009). Half of the Indian elderly are dependents, often due to widowhood, divorce, or separation, and a majority of the elderly are women (70%) (Rajan, 2001). Of the minority (2.4%) of the elderly living alone, more are women (3.49%) than men (1.42%) (Rajan and Kumar, 2003).

Table 1: Percent Distribution of Elderly by Five Year Age-Groups According to Place of Residence and Sex,
2011

Age groups	Rural			Urban				Total	
	М	F	Total	М	F	Total	Μ	F	Total
60-64	30.2	34.2	32.3	38.9	42.9	41.1	32.3	36.6	34.6
65-69	29.3	26.8	28	28.3	25.3	26.7	29.1	26.4	27.7
70-74	18.2	18.1	18.1	16.2	12.9	14.4	17.7	16.7	17.2
75-79	9.2	9.7	9.7	8.6	8.1	8.3	9.0	9.6	9.3
80-84	6.9	6.5	6.5	5.2	5.8	5.5	6.5	6.0	6.2
85-89	4.8	3.7	3.7	1.7	2.2	2.0	4.0	2.5	3.2
90+	1.5	1.7	1.7	1.1	2.9	2.1	1.4	2.2	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of Elderly	2453	2685	5138	2219	2495	4714	4672	5180	9852

Source: Population Census (2011), GOI

Table 1 shows the percentage distribution of the elderly population in rural and urban areas of India according to 2011 Census. It can be seen that elderly population between 60-64 was more concentrated towards urban areas, but as we go down the ladder we see that concentration of elderly population in rural population was higher in comparison to urban areas. Further, in the age group of 90+, the percentage of females in urban areas was more than other categories.

About 60 per cent of the elderly depends on others for their day-to-day maintenance while less than 20 per cent elderly women and the majority of elderly males, were economically independent. Amongst the economically dependent, 85 percent of men and 70 percent of women were supported by their children. Of the economically independent elderly, more than 90 percent supported one or more dependents.

Table 2 shows that nearly 40 per cent of elderly with 60 per cent being males were working and the proportion was higher in rural areas as 66 per cent of rural men were working compared to 39 per cent of urban men.

Place of Residence	Gender	Population 2011	NSSO Survey
			(2007-08)
Rural	Male	42	66
	Female	11.6	23
	Person	26.2	45
Urban	Male	29.7	39
	Female	9.1	07
	Person	18.5	23
Total (Rural +Urban)	Male	38.9	59
	Female	10.9	19
	Person	24.2	39

Table 2: Percent of elderly population working

Source: Population Census (2011) GOI, and NSSO (2007-08)

There is a close link between work participation, and poverty and illiteracy. Almost 60 per cent of the elderly are heads of the households that they are living in and as expected, the ratio is substantially higher amongst elderly men as compared to elderly women. On economic issues, about 27 per cent of the elderly had an outstanding loan and 13 per cent reported that the loan was taken for meeting the medical expenditure of the elderly (NSSO, 2007-08).

The status of health of the elderly in India and the types of disabilities they suffer from.

The need for health care increases with age as people above 65 years spend on average 1.5 times on healthcare compared to those in the 60-64 age category (Mahal et al, 2002). The largest proportion of expenditure is spent on out-patient treatment as well as the purchase of medicines. The expenditure on health care is expected to be high for the elderly because of chronic diseases. The elderly have little recourse to insurance as insurance generally covers in-patient hospital expenditure (Sharawat and Rao, 2011). As is well known, India's inefficient public system of health care has led to unregulated and mostly expensive private sector health care, rendering Indians vulnerable to high health expenditures and poverty (Pal, 2010). Financial protection for health spending is in the form of savings and insurance. But insurance is limited because of its low coverage of conditions and population; generally, people end up paying for private out-of-pocket expenditure (Duggal, 2007).

An analysis of morbidity patterns by age clearly indicates that the elderly experience a greater burden of ailments (which the National Sample Survey Organisation defines as illness, sickness, injury, and poisoning) compared to other age groups (NSS), 2006), across genders and residential locations. The elderly most frequently suffer from cardiovascular illness, circulatory diseases, and cancers, while the non-elderly face a higher risk of mortality from infectious and parasitic diseases (Alam, 2000; Kosuke and Samir, 2004; Shrestha, 2000).

The elderly in India suffer from cardio-vascular illnesses, circulatory diseases, cancer, arthritis, hypertension, osteoporosis, communicable diseases, high blood pressure, kidney problems, vision problems, diabetes, rheumatism and digestive disorders (Kumari, 2001; Jha et al., 2006).

Many older women live with multiple chronic /compromised health conditions that can limit mobility and thus further restrict their capacity to socialize. (Stevens & Olsen 2000) Women have higher rates of disabling non-fatal chronic conditions, like arthritis and osteoporosis. One of the most devastating complications of osteoporosis is a fracture, especially of the hip region, which causes the greatest morbidity and mortality. Therefore, women remain in a disabled state for a longer period of time (Leveille *et al.*, 2000). There are various reasons for these gender differences (Sternfeld, 2002) Socio-cultural factors, demographic profile, lifestyle patterns, support system, behavioral, psychological, and biological characteristics of an individual are some of the antecedents that affect, the severity of impairment, functional limitation and disability. (Jejeebhoy, 2001) Social and cultural differences also affect how we deal with aging (Rajshree Bhatt *et al.*, 2011).

Table 3: Chronic Diseases among the Elderly in India							
e Persons							
3							
27							
35							
54							
164							
63							
53							
56							

Table-3 shows the chronic diseases among the elderly according to residential status in India.

Source: National Sample Survey, 60th Round (2004).

This mixed disease burden among the elderly places increased burden on the care-providers for the aged in India. A significant number of elderly, especially females, are confined to home. **Table 3** shows the chronic disease among the elderly in India. The problem of ulcer was seen more in females belonging to rural areas. The problem of joints was more among females, especially those who are belonging to urban areas. The problem of hypertension was higher among females of urban areas. The problem of heart disease and urinary problem was higher among males in both rural and urban areas. Diabetes was higher among females in rural area and males in urban areas. When it comes to cancer percentage was higher among males in rural areas and equivalent between male and female in urban areas.

To summarize it can be said that aging and health problems in women are interrelated. They are facing numerous physical, psychological and social role changes that challenge their sense of self and capacity to live happily. Various socio-cultural factors influence overall well-being of aging women. (Evenhuis, 2001). Though there are many factors that affect the morbidity pattern, but in our literature review, we are looking at the influence of age, socio-economic status, education, marital position and family system of aging female on their morbidity pattern.

Age has special implications for women as far as health problems are concerned. The existing hypothesis holds that aging brings a decline in physical and mental health of people. The problem becomes more acute in the case of women. As women age, they are subjected to social, economic and medical negligence and abuse (Asokan, 2001). Oldest old are greatly influenced by the aging process and as a consequence, they appear to have more disabilities and physical limitations than older and lack of autonomy depriving them of participation in social activities or meeting their friends.

Women are more vulnerable to higher levels of loneliness, because of their greater longevity compared to men. As women age, they often outlive spouses, friends and family members who previously provided the social and emotional support that are important for their health and well-being (Prasher, 2003). The feeling of loneliness along with a decline in physical and physiological functioning makes them prone to psychological disturbance (Ghosh, 2006).

Age group	oup Place of Males					Females	
	Residence	Mobile	Confined	Confined	Mobile	Confined	Confined
			to Bed	to Home		to Bed	to Home
60-64	Urban	95	0.4	2.3	94.4	0.3	3.1
	Rural	95.2	0.8	2.5	94.0	0.5	2.9
64-69	Urban	93.8	0.7	4.4	93.4	6.0	4.4
	Rural	95.1	1.1	2.3	92.5	0.8	5.8
70-74	Urban	90.4	1.6	6.3	85.2	2.0	11.2
	Rural	91.2	1.8	5.9	88.1	2.0	9.6
75-79	Urban	86.9	2.3	9.4	81.8	3.3	13.0
	Rural	88.5	1.8	9.5	79.7	2.8	15.7
80 and	Urban	72.4	4.9	17.1	63.2	6.9	25.7
above	Rural	72.7	6.9	17.0	65.7	6.9	25.4
All ages	Urban	91.2	1.2	5.5	89.1	1.4	7.4
	Rural	91.7	1.7	5.1	88.5	1.7	8.3

Table 4: Percent distribution of aged persons by state of physical mobility

Source: National Sample Survey, 60th Round (2004)

Table no 4 shows the distribution of aged persons by the state of physical mobility. When it comes to first category 60-64, more females in both urban and rural areas have been confined to bed and home. In the 64-69 more females in urban areas were confined to bed and more females in rural areas were confined to home. In the next category of 70-74 more percentage of elderly population in the urban area was confined to bed and home. A similar trend has been seen in the age group of 80 and above.

The current schemes operational in India to serve the elderly.

Article 41 of the Indian Constitution provides that the State shall, within the limits of its economic development, make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement and other similar cases.

To ensure that the elderly live longer and lead a secured, dignified and productive life is a major challenge for policymakers in India. To address the issue, **an Integrated Program for Older Person (IPOP) is being implemented since 1992** with the sole objective of improving the quality of life of senior citizens by providing basic amenities like shelter, food, medical care and entertainment opportunities.

The National Policy on Older Persons (NPOP) was announced in January 1999 to reaffirm the commitment to ensure the well-being of elderly.

The **National Health Policy of 2002** highlighted the necessity for the establishment of geriatric care for the ageing population on account of improved life expectancy by emphasizing medical investigation of disorders of old age.

In addition, the Maintenance and Welfare of Parents and Senior Citizen Act, 2007 was enacted in December 2007 to ensure need-based, maintenance of parents and senior citizens and their welfare.

The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) is a living instrument to protect the human rights of older women as it is mandated to eliminate all forms of discrimination against women throughout their lifespan.

Rashtriya Swasthya Bima Yojana (**RSBY**) was launched in early 2008 and was initially designed to target only the Below Poverty Line (BPL) households, but has been expanded to cover other defined categories of unorganised workers.

The recent **National Health Policy 2015 draft** released by the Ministry of Health and Family Welfare, addresses growing concerns of this vulnerable section of the population by suggesting mechanisms involving community centered efforts in partnership with strong social support from family and caregivers.

Bottom of Form **Review of Literature:**

Kenzie A. Cameron, M.P.H, Jing Song, M.S, Larry M. Manheim, and Dorothy D. Dunlop (2010) in their work *Gender Disparities in Health and Healthcare Use among Older Adults Health needs* says that health needs were substantially greater among older women compared with men, but women had fewer economic resources. Controlling for health needs did little to explain gender differences in preventive care and increased gender differences in the use of hospital services. Women were less likely to have hospital stays (adjusted odds ratio [OR] = 0.79) and had fewer physician visits (3.07 vs. 3.30 median visits within 2 years) than men with similar demographic and health profiles. In contrast, the greater use of home healthcare among women was almost entirely explained by their greater health needs.

Subhojit Dey, Devaki Nambiar, J. K. Lakshmi, Kabir Sheikh, and K. Srinath Reddy. (2012) in their work *Health of the Elderly in India: Challenges of Access and Affordability* they opines that the growth of the elderly population in the coming decades will bring with it unprecedented burdens of morbidity and mortality across the country. As they have outlined, key challenges to access to health for the Indian elderly include social barriers shaped by gender and other axes of social inequality (religion, caste, socioeconomic status, and stigma). Physical barriers include reduced mobility, declining social engagement, and the limited reach of the health system. Health affordability constraints include limitations in income, employment, and assets, as well as the limitations of financial protection offered for health expenditures in the Indian health system.

Mohanty et al. have tested the hypothesis that the monthly per capita household health spending of the elderly households is significantly higher than that of the nonelderly households in India and concluded that the monthly per capita health spending of the elderly households is 3.8 times higher than that of the nonelderly households.

Sen et al. have analysed India's National Sample Survey data for 1986-1987 and 1995-1996 to study the change in health inequality by gender and have found that gender inequity, particularly in untreated morbidity and health care cost, continued to be severe.

Batra et al. use a longitudinal survey on rural patients suffering from cancer in a public tertiary health centre in Odisha and investigated if there are gender differences in health expenditures and treatment seeking behaviour among adults, focusing on the role of gender discrimination in explaining these differences. They conclude that expenditures on female adults are significantly lower than those on males.

Rout studies the collected data of 120 households from urban Odisha to assess the gender difference in health expenditure and shows that there is a significant difference between male and female out-of-pocket health expenditure in urban areas.

Nathanson 1975, 1977; Waldron, 1976; Verbrugge, 1989; have mentioned, It is a well-known paradox, particularly in developed nations, that despite higher life expectancies, women are more likely than men to experience and report poor health and functional limitation during the old-age period.

Das Gupta *et al.* **1995; Bloom** *et al.*, **2001; Jejeebhoy & Sathar, 2001 have mentioned in their studies;** At the same time, several researchers have documented that socioeconomic status has a significant impact on reducing gender discrimination norms, as well as reducing the gender differential in health through improving women's status or autonomy within the household or within society.

Studies in India (**Dyson & Moore, 1983; Das Gupta, 1995**) have found that, after experiencing discrimination in childhood, a female suffers even greater discrimination immediately after marriage and at early reproductive age, followed by declining discrimination from late reproductive age.

Disparity among Aged due to inequity: Inequalities in health and longevity are reflected in stratification within our society based on factors, such as Education, Income, and Gender. The heaviest burden of ill health is carried by the deprived section of society; aged, especially women. Due to poverty and poor economic sources, the disparity among elderly occurs. The health status of aged women is not satisfactory when compared with men, their male counterparts. As women works much longer hours than men do. They sacrifice nutrition, healthcare and leisure for themselves most of the times. Women work even after getting old, sick. It's inevitable to do so. They have to look after their family affairs and take care of an aged spouse, children and grandchildren. So, aged women play multiple roles in family and society. Some of the healthcare aspects arise due to inequity among aged women

- ➢ Women, whose life expectancy is more, are generally found to be less healthy and report more severe disability.
- ➢ Women report more multiple health problems associated with chronic conditions (e.g., arthritis, rheumatism, high blood pressure, back problems, and allergies)
- Women are more likely to report limitations in activities of daily living or disability in later life. (although likelihood of disability increases with age for both sexes)
- More than 80 percent of the elderly persons live in rural areas, and female elderly outnumber the men. Factors in women's lower mortality possibly biological/genetic component, but also determined by social and economic factors.
- The most vulnerable are those who do not own productive assets, have little or no savings or income from investments, have no pension or retirement benefits, and are not taken care of by their children, or live in families that have low and uncertain incomes and a large number of dependents. Nearly half of the elderly are fully dependent on others.

Implications of gender differential and poverty on elderly:

- Women more likely than men to be widowed, not remarry, live alone, and are poorer; but also more likely to maintain social support networks into old age.
- Although equation of old age with declining health is valid with regard to physical health, is less true of psychological and emotional health and social well-being. With advancing age, about 77% of men and 85% of women aged 65+ suffer from at least one chronic condition; i.e. persistent physical or mental health problem.
- An analysis of systematically ascertained chronic conditions demonstrated that women reported more arthritis, hypertension, and poor vision than did men, whereas men reported a higher incidence of cancer, diabetes, and heart disease. No gender difference was identified for obesity, pulmonary disease, or stroke.

Women also reported fewer economic resources in terms of income and wealth than men. Although similar proportions of men and women had health insurance coverage through Medicare, Medicaid coverage was more frequent among women. But the chronic conditions do not necessarily interfere with day-to-day functioning...

- The most common chronic conditions are arthritis and rheumatism, eye problems such as cataracts or glaucoma, back problems, heart disease, and diabetes
- ➢ Family roles and the persistence of sexual division of domestic work at older ages can be important determinants of health status and gender inequalities in health.
- Health needs were substantially greater among older women compared with men, but women had fewer economic resources. Controlling for health needs did little to explain gender differences in preventive care and increased gender differences in the use of hospital services. Women were less likely to have hospital stays than men with similar demographic and health profiles. In contrast, the greater use of home health care among women was almost entirely explained by their greater health needs.
- Among adults >age 65, women tended to be older than men and were more likely to live alone. Women reported more health needs in terms of functional limitations (mobility, stair climbing, upper extremity difficulty) and disability than men. An analysis of systematically ascertained chronic conditions demonstrated that women reported more arthritis, hypertension, and poor vision than did men, whereas men reported a higher incidence of cancer, diabetes, and heart disease. No gender difference was identified for obesity, pulmonary disease, or stroke.

Nevertheless, it is very surprising to notice that the old-age period is very poorly researched as far as gender differentials in health and its interaction with socioeconomic status are concerned. For India, in particular, very little is known about the gender differential in the health of the old-age population and its interaction with socioeconomic variables in the later years of life. Understanding the gender differential in the health of the old-age population worldwide, and gender differences in the proportion of old-age population where females outnumber males (**United Nations Department of Economic and Social Affairs, Population Division, 2004**). Specifically, understanding the determinants of gender differentials in health will help policymakers take appropriate policy measures towards reducing the gender gap and addressing the health problems of the old-age population.

Objective:

- > The present research study aims to shed light on the changing pattern of Gender disparities in morbidities and healthcare use among older adults in India.
- > This research study attempts to examine the gender disparity in morbidities and health care expenditure.

Data source:

The main source of data was National Sample Survey Office unit level data for the 71st (2014) and 66th (2009-10) rounds. In addition, data from the 60th round (2004) survey on "Morbidity and Health Care" will also be used. The National Sample Survey Organisation (NSSO) conducted a survey on the elderly (persons of age 60 years and above), to assess the nature and dimensions of the socio-economic problems of the aged. Information on the socio-

economic condition of the aged, data on some chronic diseases and physical disabilities were also collected during these rounds of the NSS surveys where the main objective was to focus on the socio-economic and health conditions of the currently aged population, and the emerging policy issues of elderly care in India

It is a nationally representative household survey and, from each household, expenditure on food items and nonfood items was collected for the last thirty days. Expenditure on education was collected for a reference period of one year. Items of expenditure on institutional health care include medicine, X-ray, ECG, pathological test, doctor's/surgeon's fee, hospital and nursing home charges, and other medical expenses that were collected for a reference period of one year but for non-institutional health care expenditure; the reference period is the last 30 days. Further, for each household member, details about age, sex, marital status, educational level, and occupation were also collected. The sampling designs adopted in both rounds of NSSO surveys were multi-stratified sampling and were comparable.

Definitions of Concepts:

In India, persons aged 60 or above are considered elderly or senior citizens. The Maintenance and Welfare of parents and Senior Citizens Act, 2007 (Gazette of India, 2007) defines a senior citizen as a person who has attained the age of 60 years or above.

Population ageing is a phenomenon that occurs when the proportion of aged in the total population increases to over seven percent owing to reduction of fertility and mortality (Prakash 1999). Aging emerged as an important issue in India, with the total number of elderly persons being expected to increase from 70.6 million in 2001 (6.9 per cent of population) to 173 million by 2026 (12.4 per cent of population) (Subaiya and Bansod 2011). Estimates by the Planning Commission (2011) indicate that by 2050, one out of every five persons in India will be aged above 60 years.

Health disparity has been defined by the *World Health Organization* as the "differences in health care received that are not only unnecessary and avoidable but are also unfair and unjust. The existence of health disparity implies that there is no health equity. Equity in health refers to the situation whereby every individual has a fair opportunity to attain their full health potential, and if avoidable, no one should be disadvantaged from achieving this potential. Overall, the term "health disparities," or "health inequalities," is widely understood as the differences in health between people who are situated different positions in a socio-economic hierarchy."

Advocating gender equity in health does not mean insisting that women and men receive equal quotas of resources and services. On the contrary, it means that resources are assigned and received differentially, according to the needs of each sex within their socioeconomic context. Equity in health status does not imply equal levels of mortality and morbidity among women and men, but the elimination of avoidable differences between them with respect to opportunities to enjoy health, vulnerability to illness or disability and premature death.

Gender discrimination makes women more vulnerable to various diseases and associated morbidity and mortality. From socio-cultural and economic perspectives women in India find themselves in subordinate positions to men. They are socially, culturally, and economically dependent on men. Women are largely excluded from making decisions, have limited access to and control over resources, are restricted in their mobility, and are often under threat of violence from male relatives. Sons are perceived to have economic, social, or religious utility; daughters are often felt to be an economic liability because of the dowry system. In general, an Indian woman is less likely to seek appropriate and early care for disease, whatever the socio-economic status of the family might be. This gender discrimination in health care access among aged becomes more obvious when the elderly women are illiterate, unemployed, widowed or dependent on others. The combination of perceived ill health and lack of support mechanisms contributes to a poor quality of life.

Another dimension of aged women is, they are more in number in the aged population in comparison with their male counterparts, but old age social security and benefits are fewer for women. This is mainly due to non-availability of old age income security programs for the workers in the large informal sector and coverage gap in the formal sector.(P. Madhava Rao, Social Security for the Unorganized in India) That is why there are poorer and needy among the female aged widows than among the male aged. They also suffer from more chronic diseases more intensely and also from disabilities. The situation has heavy financial implications for the health and social service sectors. Therefore, it will be a challenge for the welfare state to find a viable social security system for women that will meet their health and other old age needs.

Indian women have always been introvert by nature, that's why they are vulnerable and soft target of wrong doers. It has been observed that for sake of peace of their home and stability in their life they hardly complain about anything. Due to Illiteracy, poverty, lack of awareness about their rights, less exposure to the mainstream of society and their social/family background their rights, even basic human rights are violated from time to time.

The problems faced by the elderly generally arise from inequality of opportunity for employment; inadequate income; unsuitable housing; lack of social services and of provisions for sustaining physical and mental health; stresses and strains produced by changing family patterns and family relations; and lack of meaningful activities in retirement.

Methodology:

This study is based on secondary data. Descriptive statistics and bivariate analysis were used to describe the characteristics of elderly and to assess whether gender disparity exists in health expenditure. As for the allocation of household health expenditure to individual members by age a cubic polynomial regression is adopted.

The following multivariate multinomial regression models were estimated to assess the morbidity prevalence patterns by socioeconomic and demographic predictors of older widows. The mathematical form of the regression models fitted is given as below.

Relevance of the study:

In traditional Indian culture aged people are well respected, but the situation is changing in present setup because of conspicuous reasons, like the disintegration of joint family system, migration, rapid industrialization, urbanization and deteriorating social values. The joint family system is being replaced by a smaller nuclear family. With the traditional system of the lady of the house looking after the older family members at home is slowly getting changed as the women are also participating in activities outside the home and have their own career ambitions. All these changes are causing adverse effects on the well-being of the aged people. In Indian culture, family is a sort of insurance that one will be looked after in one's old age. As a consequence of urbanization and industrialization, the integrity of the family and the existence of the aged as an integral part of the family are being uprooted. The young generation should understand that the aged need physical attention and emotional caring. The old love to spend their days in surroundings very familiar to them, filled with the sounds and touch of those dearest to them. The present study provides an intensive overview of the health status of the elderly in India. Salient features of Indian population with reference to age distribution and causes of death have been discussed in the light of human right in India.

Findings:

Table 5 presents morbidity prevalence rates per 1000 persons by various categories of diseases among single older women persons (60+). Overall, morbidity prevalence was significantly greater among single older women (337)

compared to single older men (299) with a corresponding gender ratio of 1.13 (p,0.001).

Morbidities*	Total	Male	Female	Gender Gap@
Communicable diseases	68	75	66	0.87***
Diarrhoe / Dysentry	5	3	6	1.75***
Fever of unknown Origin	13	13	13	1.07
Tuberculosis	4	7	3	0.43**
Whooping Cough	6	10	5	
Diseases of Skin	4	8	3	0.37**
Diseases of Kidney / Urinary systemDiseases of Skin	6	9	5	0.58***
Gasrritis / gastric or peptic ulcer	21	18	21	1.16*
Other Communicable Diseases	8	18 7	9	1.10*
Other Communicable Diseases	0	/	9	1.20
Non- Communicable Diseases	331	292	344	1.18***
Contract	52	54	51	0.94
Diseases of eye	13	9	15	1.56***
Disorders of joints and bones	92	85	95	1.11
Bronchil Asthama	35	43	32	0.75***
Mellitus Diabeties	27	17	30	1.70***
Respiratory including ear / nose / throat ailment	14	18	13	0.74
Mental disorder	16	12	17	1.48***
Heart Diseases	18	17	18	1.04
Hypertension	56	33	63	1.90***
Other Non- Communicable diseases	8	3	10	3.20***
Disabilities	109	117	107	0.91
Hearing	36	40	34	0.85
Locomotion	33	35	32	0.91
Visual	39	39	39	1
Speech	2	2	1	0.61
Accidents / Injuries / Poisoning	7	5	7	1.56*
Other Diagnosed Diseases	50	48	50	1.03
Other non diagnosed Diseases	16	17	16	0.9
Any Ailment*	328	299	337	1.13***

Table 5. Marbidity Dravalance (no	n 1000) amang Oldan Dansang (ag	(0 and above) by ser in India 2004
Table - 5: Morbially Prevalence (pe	r 1000) among Older Persons (age	e 60 and above) by sex in India, 2004

Notes: @ individual ailments will not add up to total because of reporting of multiple ailments.

1 includes Hepatitis/ Jaundice, amoebiosis, sexually transmitted disease, malaria, eruptive, mumps, Diptheria, Filariasis / elephantiasis and others.

2 includes Neurological disorders, psychiatric disorders.

3 includes Prostatic disorders, gynecological disorders, goiter, tetanus, diseases of mouth/teeth/gum, cancer and other tumors, anemia.

*Reference period of last 15 days prior to the survey.

@Gender gap = female/male, chi2.|z|: ***p, 0.001, **p,0.05, *p,0.10

The prevalence of communicable diseases was lower among single older women (66) compared to single older men (75) with a corresponding gender gap of 0.87 (p.0.001). On the other hand, the prevalence of non-communicable diseases was significantly greater among single older women (344) by 18% (p,0.001) compared to single older men (292). In communicable disease category, the prevalence of diarrhoea (6) and gastritis/gastric or peptic ulcer (21) followed by other communicable diseases (9) was significantly greater among single older women compared with single older men. In contrast, the prevalence of whooping cough (10), skin diseases (9), and diseases of kidney/ urinary system (8) were greater among single older male. Tuberculosis (7) was next widely prevalent disease among older single men. The patterns of non-communicable diseases showed that prevalence of disorder of joints and bones (95), hypertension (63) and Mellitus diabetes (30) diseases were significantly greater among single older women compared with older single men followed by heart diseases (18), mental disorders (17) and eye diseases (15). This was contrasted by the greater prevalence of cataract (54), bronchial asthma (43) and respiratory ailments (18) among older single men. Not surprisingly, incidences of accidents/injuries/poisonings were more common among single older women higher by 56% (p,0.001) compared to older single men. Furthermore, disability prevalence was comparatively greater, though statistically not significant among older single men (117) than single older women (107). It is evident that the prevalence of non-communicable diseases is swiftly mounting in India coupled with the persistent communicable diseases. Consequently, older adults are at greater risk of reporting greater prevalence of acute chronic diseases, which are generally degenerative and human-made in nature. Results presented in this section depict significant gender differences in morbidity prevalence among single older women. The disease burden is significantly greater among single older women compared to older single men. Patterns in morbidity prevalence indicate that single older women were reporting significantly greater prevalence of major chronic diseases such as diabetes, heart diseases, diarrhoea, mental illnesses, hypertension and other non-communicable diseases. In recent decades, a growing volume of literature has documented that India is facing a rapid pace of health-epidemiological transition with a swift increase in the prevalence of chronic illness.

The adjusted odd ratios from logistic regression analysis on the likelihood of utilizing health care services among those single older women who reported morbidities by socio-economic and demographic determinants are presented in Table 6. Results showed that single older women living in urban areas had 14% greater likelihood of accessing health care services compared to single older women living in rural areas at 10% level of significance. Age was negatively associated with utilization of health care services, particularly among single oldest-old women. Single oldest-old women in age 70+ were 15% (p,0.10) less likely to seek health care services compared with single older women in age 60-65. No significant association was observed between religion and health care use among single older women. Single older women of scheduled caste/tribes and other backward classes were significantly less likely to seek treatment compared with older widows of other/general caste groups respectively by 42% (p,0.001) and 26% (p, 0.001). The likelihood of seeking health care services increased significantly with the level of education. Single older women literate up to middle school were 1.6 (p,0.001) times more likely to seek treatment compared with illiterates. Similarly compared to illiterates, single older women with the middle pass and high school & above education were more likely to seek treatment respectively by 3.6 (p,0.001) and 3.8 times (p,0.001). It is indeed that better economic conditions positively influence the likelihood of utilizing health care services. A strong positive relation was observed between monthly per capita expenditure quintiles and health care utilization among single older women. single older women of MPCE class5 were 2.9 times (p,0.001) more likely to seek treatment for reported morbidities compared with single older women of MPCE class1. On the other hand, economically dependent single older women had a greater likelihood of seeking treatment for the reported ailments. This could be possible due to the fact that majority of economically independent single older women were living alone and at the same time, there was no source of income for them. Living arrangement is a most plausible factor for the treatment

seeking behavior among single older women. Single older women living with children and other relatives had 49% (p,0.001) greater likelihood of seeking health treatment for reported diseases compared with those living alone. Similarly, single older women living with non-relatives were having 14%, though statistically not significant, higher chances of seeking health care services compared with single older women living alone.

Table - 6: Logistic Regression Analysis: Modeling of Socio-economic and Demographic Determinants of Health care Seeking Behaviour Among Older Women (60+) With Morbidities in India, 2004.

Background Variables	Εxp (β)	(95%CI)
Place of Residence (ref.=rural)		
Urban	1.14*	(0.97-1.35)
Age (ref.=60-65)		
65-70	1.05	(0.85-1.28)
70+	0.85*	(0.71-1.02)
Religion (ref.= Hindu)		
Muslims	1.08	(0.87-1.34)
Others	1.02	(0.77-1.35)
Social Group (ref.=others)		
STs & SCs	0.58***	(0.48-0.71)
OBCs	0.74***	(0.63-0.88)
Educational Level (ref.illiterate)		
<middle complete<="" school="" td=""><td>1.62***</td><td>(1.28-2.06)</td></middle>	1.62***	(1.28-2.06)
middle school complete	3.55***	(1.89-6.68)
high school complete & above	3.84***	(1.83-8.04)
Living Arrangements (ref.=living alone)		
Living with children & other relatives	1.49***	(1.17-1.89)
Living with other relatives	1.14	(0.83-1.57)
Economic Independence (ref.=not dependent)		
Partially Dependent	1.1	(0.82-1.49)
Fully Dependent	1.12	(0.88-1.42)
MPCE= percentile class (ref.= Class1)	1.28***	
Class2	1.65***	(1.00-1.63)
Class 3	2.09***	(1.30-2.09)
Class 4	2.87***	(1.65-2.65)
Class5	-2396.97	(2.22-3.71)
Log likelihood	362.7	
$LR x^2$	0.001	
Prob.>x ²		

Note: The sample for analysis of utilisation of health care services is those older women who reported morbidities; MPCE= monthly per capita expenditure. ***p<0.001, **p<0.05, *p<0.10

Table 7 presents effects of socio-economic and demographic factors on the likelihood of reporting various diseases in terms of communicable, non-communicable and other diseases estimated by fitting multinomial regression models. Adjusted percentages of single older women (60+) reporting a specific type of ailments by different socio-economic and demographic background characteristics are arranged. Significant rural-urban differences were observed in morbidity prevalence among single older women. Single older women living in rural areas reported

greater prevalence of communicable diseases and disabilities (16.8%) compared to those in urban areas (12.5%) and vice-versa in the case of non-communicable diseases. The predictor's age, economic independence, monthly per capita expenditure quintiles and education, showed positive direction of impact on the prevalence of ailments among single older women. The prevalence of non-communicable diseases increased significantly with age and the same pattern was observed for other types of diseases. Morbidity prevalence was greater among single older women in age 70+ (49%) compared with single older women in age (31%). The prevalence of morbidity increased with per capita expenditure percentile classes. Overall, 43% single older women of expenditure class reported ailments compared with 37% in expenditure class1. Non-communicable diseases were highly prevalent among single older women of monthly per capita expenditure percentile class5 (26.4%). However, no clear pattern was seen between expenditure classes and prevalence of communicable diseases and other diseases. Economically dependent single older women reported greater prevalence of morbidities (40%) compared with economically independent single older women (33%). Substantial education differentials were seen in the pattern of morbidity prevalence among single older women. The prevalence of communicable diseases was greater among illiterate single older women (5.2%) compared with high school & above pass single older women (3.7%). Contrary to this, single older women with high school & above education reported significantly greater prevalence of non-communicable diseases (35.7%) compared with illiterate single older women (21.4%). By religion, single older women of Hindu religion reported a lower prevalence of both communicable and non-communicable morbidities compared with Muslims and others. A lower prevalence of non-communicable diseases was reported among single older women belonging to Hindu religion (22.3%) compared with Muslims (29.3%) and others (30.7%). The prevalence of communicable diseases was also lower among single older women of Hindu religion (5%) compared to Muslims (7.8%) and Others (6.8%). Non-communicable diseases were highly prevalent among single older women of general caste (24.3%) compared to scheduled caste/scheduled tribes (21.4%) and other backward classes single older women (22.1%). At the same time, the prevalence of communicable diseases (6.4%) was also significantly greater among single older women of general caste groups. Results by living arrangement showed that single older women living with their relatives/non-relatives reported greater prevalence of diseases compared with those living alone. However, disease pattern showed that the prevalence of communicable diseases was greater among single older women living alone (4.8%) compared those living with non-relatives (3.5%).

Background variables	Communicable	Non- communicable	Other diseases	Non- reporting
	diseases	diseases		
Age (rc)				
60-65	5.1	17.88	8.11	68.91
65-70	4.29	24.17***	10.31***	61.24
70+	4.45	29.84***	14.65***	51.06
Place of residence				
Rural (rc)	5.58	21.48	11.12	61.82
Urban	3.28***	26.66***	9.29*	60.76
Social group				
Others (rc)	6.37	24.34	9.77	59.52
STs & SC	4.46***	21.45**	11.54	62.54
OBC	4.14***	22.10**	10.9	62.87

Table 7. Multinomial logistic regression analysis: adjusted morbidity prevalence(%) among older widows(age 60+)by socio- demographic background characteristics in India, 2004.

Religion				
Hindu (rc)	4.81	22.31	10.69	62.2
Muslim	7.83***	29.32***	11.73**	51.13
Others	6.77***	30.73***	10.03	52.47
Educational level				
Illiterate (rc)	5.18	21.37	10.65	62.8
<middle complete<="" school="" td=""><td>3.71</td><td>29.77***</td><td>10.74</td><td>55.78</td></middle>	3.71	29.77***	10.74	55.78
Middle school complete	2.39	37.15***	8.92	51.55
High school complete & above	3.68	35.73***	10.82	49.77
Living arrangement				
Living alone (rc)	4.78	20.52	10.71	63.98
Living with children and other relatives	5.12	23.24**	10.39	61.26
Living with other non-relatives	3.46	21.26	13.21*	62.07
Economic independence				
Not dependent (rc)	3.89	20.29	9.65	63.98
Partially deepndent	4.49	25.99***	8.05	61.26
Fully dependent	5.19**	22.74**	11.30*	60.77
MPCE @ percentile class				
Class 1 (rc)	4.49	20.3	12.19	63.02
Class 2	3.98	22.02	9.21***	64.79
Class 3	5.09	21.72	10.61	62.59
class 4	5.56	22.35	10.74	61.35
Class 5	5.22	26.4	10.7	57.68
Log livelihood	-6323.57			
LR ×2	653.03			
Prob.>x2	0.001			
All	7.41	19.19	13.86	59.54

Note : ***P<0.001, **p<0.05, *P<0.10, MPCE- monthly per capita expenditure reference category –rc

Table 8 shows the components of total household expenditure and expenditure done on elderly in the years 1999-2000 and 2007-08. When it comes to food items, the decline has been observed in total expenditure which has ultimately laid an impact on expenditure on the elderly population. When it comes to non-food items expenditure has increased in both the categories and when it comes to health there has been a marginal increase but still it is less than the other components, similar was the case of education. This indicates that when it comes to important social indicators like health and education, we are still lagging behind. There is a need to increase awareness about regular health check-ups and information about various health deformities occurring at an elderly stage.

Table-8: Components of Household Expenditure in 1	India in 1999-2000 and 2007-2008
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Components	Household Expenditure (Percent)		Household Expenditure on Elderly (percent)		
	1999-2000	2007-08	1999-2000	2007-08	
Food	59.2	27.3	39.5	25.8	
Non Food	40.1	66.2	59.6	69.2	
Health	0.5	0.6	0.7	0.8	

Education	0.3	5.9	0.2	4.2
Total	100	100	100	100

(Source): 60th Round NSSO

Table 9 shows the percentage of expenditure on each part of health care in India. When it comes to medicine there has been a slight increase in the total expenditure on medicine but the slight decline has been seen when it comes to expenditure on elderly. But on a positive note gender gap between male and female have declined. When it comes to pathological tests percentage of expenditure conducted on elderly population has increased and there has been a marginal increase in the gender gap as well. In doctor and surgeon fee, there has been a decline in overall expenditure as well as expenditure done on elderly. When it comes to hospital and nursing home charges there has been a decline in expenditure on elderly as well as gender gap. On a whole there has been an increase in the expenditure done on elderly and a decline has been seen in the gender gap.

Table-9: HH Expenditure and Gender Differences on Different Health Items among the Elderly at two points of time.

Health Items	Item wise HH expenditure for Healthcare (Percent)		Item Wise Share of HH Expenditure for Elderly Health Care (Percent)		Gender Differences in Item Wise Expenditure of Elderly Health Care (Male- Female Ratio)	
	1999-2000	2007-08	1999-2000	2007-08	1999-2000	2007-08
Medicine	73.4	77.7	25.3	25.1	13.3	5.3
X-Ray, ECG,	5.9	5.4	7.2	31.4	2.6	2.8
Pathological Test and so forth						
Doctor/Surgeon Fee	13.4	10.8	46.0	20.6	28.6	8.5
Hospital and Nursing	3.2	0.7	35.7	24.1	16.8	10.6
Home Charges						
Other Medical	4.1	5.3	5.5	26.1	25.6	21.1
Expenses						

(Source) 60th Round NSSO

Conclusions:

So far, very few attempts have been made to study the disease patterns among single older women and their treatment seeking behavior in the light of human rights in India. At the same time, very limited information on the health conditions of single older women and their treatment seeking behavior is available. In a very first effort, this paper congregated critical evidence that single older women suffered from greater rates of self-reported morbidities and a very lower proportion of single older women were able to access health care services. Disease patterns showed that non-communicable diseases were more widely prevalent among single older women. On the other hand, the contribution of communicable diseases to disease burden was comparatively lower. These patterns in disease prevalence were in expected direction as India is swiftly entering in the advanced phases of health transition and demographic ageing. Here, the most striking concern was emerged that a greater proportion of single older women reported lifestyle, behavioural and environmental related morbidities compared to their counterparts, single older men. Substantial disparities in disease prevalence patterns and treatment seeking behaviour were noticed by age, residence, education and other socio-economic conditions. Single oldest-old women reported the greater prevalence of morbidities due to weakening resistance power in old ages. Better socioeconomic status is strongly associated

with better self-reporting of health status and greater utilization of health care services. However, in the process of health-epidemiological transition, higher socio-economic status is also associated with the greater reporting of sedentary lifestyle related morbidities. Likewise, single older women with low socio-economic status reported greater prevalence of communicable diseases and vice-versa for non-communicable diseases.

There were strong reasons to assess rural-urban differences in health and well-being conditions of single older women, particularly in Indian traditional societies. First, a major chunk of single older women population lives in rural India (75%). Second, single older women from rural areas tend to be the highly marginalised person in terms of socioeconomic conditions due to various patriarchal norms such as patriarchal inheritance and division of labour by gender coupled with the lack of social reforms for single older women in rural India [28,30]. Third, better quality health care services are more concentrated in urban areas and, still to achieve in rural areas even for the general population. Fourth, due to long period social negligence, single older women are most likely to perceive their ill health condition as god-gifted.

The consequences of this social and economic marginalisation were manifest in poor health conditions and low levels of health care services utilization. Single older women in rural areas reported greater prevalence of communicable diseases and lesser utilization of health care services. This is plausible as single older women living in rural areas are more prone to poor household environmental conditions such as the use of solid fuel for cooking, poor access to water and sanitation facilities. The government did not incline to give adequate priority to the social protection of widows in rural India in the absence of reliable and adequate information on health conditions of single older women. An effective implementation of social security measures may require a great deal of activism on the part of non-government institutions, including the women's movement, particularly in rural areas.

This study has important policy implications too. Overall, marital status coupled with age plays a significant role in the determination of health and the relationship we investigated is sensitive for gender too and therefore, the health policy should take care of vulnerable groups in a particular stage of life. Given the evolving scenario of ageing, particularly its female dimension, questions of support and care to the female aged especially when they are single older women need to be addressed first. At present, India is having a national policy for older persons. However, how effectively it is implemented in the last decade, is a big question. The present policy needs to be reformulated to come out with a comprehensive policy for older persons.

The policy should address the socio-economic aspects of older persons and proper attention should be given to most vulnerable groups of older persons such as single older women living in rural areas and those are socially and economically backward. Community-level interventions are urgently required to spread awareness and knowledge among older persons particularly those with low socio-economic conditions.

Last but not the least, there is a need for a prevention strategy that may include lifestyle changes during middle age in order to curtail the incidence or at least severity of lifestyle related morbidities that are reported by single older women with better socio-economic status.

Recently, the government of India came forward with a bill to legalize the duty of parent care by the children. The growth of the elderly population in the coming decades will bring with it unprecedented burdens of morbidity and mortality across the country. As we have outlined, key challenges to access to health for the Indian elderly include social barriers shaped by gender and other axes of social inequality (religion, caste, socioeconomic status, and stigma). Physical barriers include reduced mobility, declining social engagement, and the limited reach of the health system.

Areas of Future Research

During the course of this study, the researcher noticed some of the areas which need more detailed study. Study on these areas will help government and other policyholders in designing policies for the betterment of older people.

- > There is a need for more research on living arrangement and problems faced by elderly who do not have any pension or social security benefits as they are the most vulnerable among aged.
- Problems of elderly living in institutional setup or old age homes should be studied as needs and problems of these elderly will be different from those in family settings.

Policy recommendations

The study aims to offer recommendations with the objective of improving the overall health of elderly living in India. Individual support structures cannot operate in isolation and are required to function in collaboration and cohesion with each other. For an ageing individual, retirement from active employment and death of a spouse are not only critically stressful events but also demand social support system and involvement and participation of children, grandchildren, same age peers and family networks. Hence, psychologists, social workers, medical professional and rehabilitation experts will be required to effectively collaborate with the family members of the elderly with the objective of improving their mental health, emotional well-being, and subjective assessment in terms of positive subjective experiences.

Moreover, they can use mobile phones (android applications), webcams, social networking and the internet in communicating instantly with others in times of medical crisis. Health care industry is in severe dearth of revolutions in geron-technology while we strongly recommend constant upgradations in the field of geriatrics. The health departments are urged to maintain a secure database, both longitudinal and cross-sectional in nature, in an attempt to predict and control the occurrence of disease, illness and new age health problems among the vulnerable group.

Most of India's health programmes and policies have been focusing on issues like population stabilisation, maternal and child health, and disease control. However, the demographic transition resulting in increasing older population in India gives a prelude to a new set of medical, social, and economic problems that could arise if timely initiative in this direction is not taken by the program managers and policy makers. Most of India's elderly are economically dependent; the cost of treatment is often a burden on the household. Hence, there is a need for expansion of social and community services for older persons, particularly women, and enhancement in their accessibility and use by removing socio-cultural, economic, and physical barriers and making the services client oriented and user-friendly. Looking at this scenario, the government should implement programs addressing health care facilities and improving the social status of the elderly while paying attention to the females.

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